

Notice of Allowability

Application No.

09/897,772

Applicant(s)

ALLEN, KEITH D.

Examiner

Art Unit

Celine X Qian

1636

-- The ^oMAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 1/20/04.
2. ☒ The allowed claim(s) is/are 28-31.
3. ☒ The drawings filed on 6/29/01 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Anne-Marie Falk
ANNE-MARIE FALK, PH.D
PRIMARY EXAMINER

Art Unit: 1636

EXAMINER'S AMENDMENT

The after final amendment filed on 1/20/04 has been entered.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative Kelly Quast on 2/11/04.

The application has been amended as follows:

Claim 28. A transgenic mouse whose genome comprises a disruption in an endogenous BMP gene comprising the nucleic acid sequence [comprising] set forth in SEQ ID NO:1, wherein where the disruption is homozygous, the transgenic mouse lacks production of functional protein encoded by the nucleic acid sequence, and exhibits at least one of the following phenotypes: a kinky tail, low body weight or short body length, relative to a wild-type mouse.

Claim 30. A transgenic mouse comprising a heterozygous disruption in an endogenous BMP gene comprising the nucleic acid sequence [comprising] set forth in SEQ ID NO:1, wherein the disruption in a homozygous state results in lack of production of functional protein encoded by the nucleic acid sequence; and [resulting in] a transgenic mouse exhibiting at least one of the following phenotypes: a kinky tail, low body weight or short body length, relative to a wild-type mouse.

Art Unit: 1636

Claim 31. A method of producing a transgenic mouse comprising a disruption in an endogenous BMP gene comprising the nucleic acid sequence [comprising] set forth in SEQ ID NO:1, the method comprising:

a) introducing a targeting construct capable of disrupting the endogenous BMP gene comprising the nucleotide sequence set forth in [comprising] SEQ ID NO:1 into a murine embryonic stem cell;

b) selecting a murine embryonic stem cell that has undergone homologous recombination;

(c[b]) introducing the murine embryonic stem cell into a blastocyst;

(d[c]) implanting the resulting blastocyst into a pseudopregnant mouse, wherein said mouse gives birth to a chimeric mouse; and

(e[d]) breeding the chimeric mouse to produce the transgenic mouse, wherein where the disruption is homozygous, the transgenic mouse lacks production of functional protein encoded by the nucleic acid sequence [comprising] set forth in SEQ ID NO: 1, and exhibits at least one of the following phenotypes: a kinky tail, low body weight or short body length, relative to a wild-type mouse.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celine X Qian whose telephone number is 571-272-0777. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel Ph.D. can be reached on 571-272-0781. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1636

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Celine Qian, Ph.D.

Anne-Marie Falk
ANNE-MARIE FALK, PH.D
PRIMARY EXAMINER